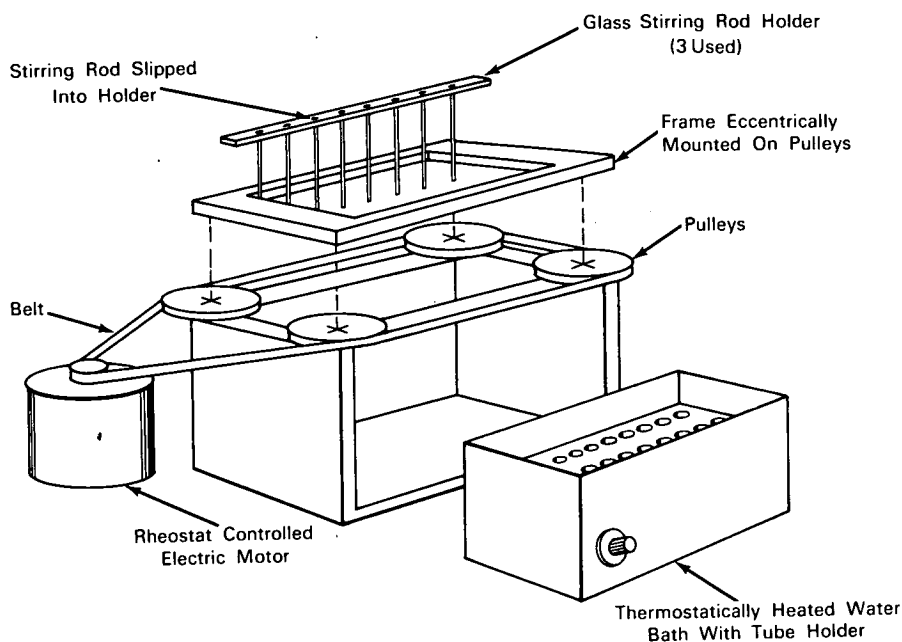


NASA TECH BRIEF



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Multiple Test Tubes Stirred Mechanically



The problem: To stir the contents of many test tubes simultaneously under precisely controlled laboratory conditions.

The solution: A mechanical stirring device which accommodates up to 25 test tubes incorporating the following features: variable stirring rate; minimal exposure of tube contents to contamination; unattended operation over a period of up to 24 hours; thermal control of tube contents; and simple operation, cleaning, and maintenance. In addition, the device is able to stir solids which are in suspension.

How it's done: An electric motor is mounted on a framework which houses a water bath. Glass stirring rods are slipped into each of three stirring rod holders.

These holders are then attached to an assembly which is eccentrically mounted on four pulleys that are driven by a belt from the drive motor. The eccentric motion of this upper frame causes the stirring rods to describe a circular motion in the test tubes. The test tubes are contained within a water bath which is supplied with a heater and thermostat.

A rheostat controlled electric motor allows a variable stirring rate and unlimited periods of operation. Construction is simple, thereby facilitating operation, cleaning, and maintenance. Temperature may be regulated by the thermostatically controlled water bath. The danger of contamination can be minimized by enclosing the device or using it in a controlled environment chamber.

(continued overleaf)

Notes:

1. This device should be useful in chemistry, biology, and medical laboratories which deal in large numbers of samples (e.g., hospital and testing and analytical laboratories).
2. Inquiries concerning this invention may be directed to:

Technology Utilization Officer
Ames Research Center
Moffett Field, California, 94035
Reference: B65-10120

Patent status: NASA encourages the immediate commercial use of this invention. Inquiries about obtaining rights for its commercial use may be made to NASA, Code AGP, Washington, D.C., 20546.

Source: Henry J. Leon and Ira J. Strong
(ARC-42)